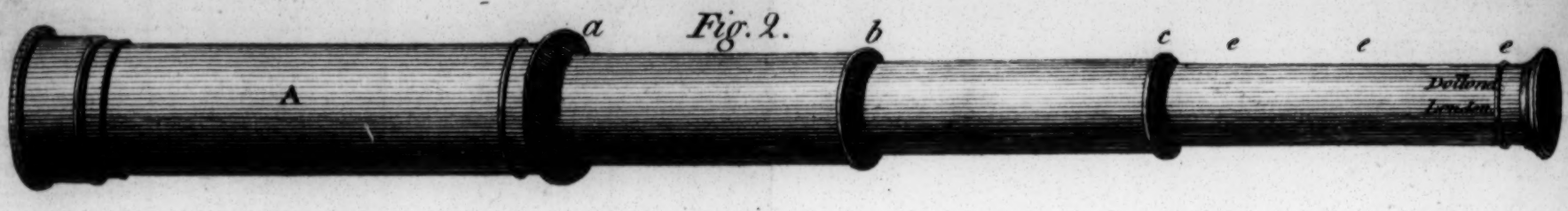

Fig. 2.

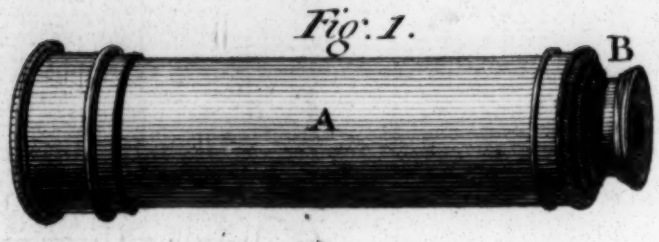

Fig. 1.

DESCRIPTION

OF THE

Improved ACHROMATIC TELESCOPE,

Made with BRASS SLIDING TUBES, by

P. and J. DOLLOND, OPTICIANS,

IN

St. PAUL's Church-Yard, LONDON.

THE uſual method of making the ſliding tubes of Teleſcopes has been with paper covered with vellum; but as ſuch tubes have been found liable to ſeveral inconveniencies from being affected by the moiſture of the air, they are now contrived to be made exceedingly thin of braſs, and the outſide tube of mahogany.

The ſliding tubes are all made to ſtop when drawn out to the proper length, ſo that by applying one hand to the outſide tube A, fig. 1. and the other hand to the end of the ſmalleſt tube B, the Teleſcope may be, at one pull, drawn out to its whole length, as is repreſented by fig. 2; then any of the tubes may be ſlipped in a little, while you look through, and the object rendered diſtinct to any ſight.

To make the tubes ſlide properly, they all paſs through ſhort ſprings or tubes, which are ſcrewed in at *a*, *b*, and *c*, fig. 2. Theſe ſprings may be unſcrewed from the ends of the ſliding tubes by means of the milled edges which project above the tubes, and the tubes taken from one another when required.

There are four convex eye-glaſſes to theſe Teleſcopes, whoſe ſurfaces and focal lengths are ſo proportioned as to render the field of view very large. Theſe eye glaſſes are all contained in the ſmalleſt ſliding tube; three of them may be ſeen by unſcrewing the tube at *e e e*, and the fourth, which is at the end of the tube, may be come at by unſcrewing the ſpring at *c*.

Theſe Teleſcopes are of three different lengths and ſizes, uſually called 1 foot, 2 feet, and 3 feet; but, to be more particular, the dimenſions, &c. are given as follow.

Length when in Uſe.	*Length when ſhut up.*	*Aperture of the Achromatic Object-Glaſs.*	*Magnifying Power in Diameter.*	*Weight.*
14 Inches.	5 Inches.	1, 1 Inches.	22 Times.	6 Ounces.
28 ditto.	9 ditto.	1, 6 ditto.	35 ditto.	16 ditto.
40 ditto.	10 ditto.	2, 0 ditto.	45 ditto.	30 ditto.